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(54) **Anti-angiogenic compositions and methods of use**

(57) The present invention provides compositions comprising an anti-angiogenic factor, and a polymeric carrier. Representative examples of anti-angiogenic factors include Anti-Invasive Factor, Retinoic acids and derivatives thereof, and taxol. Also provided are methods for embolizing blood vessels, and eliminating biliary, urethral, esophageal, and tracheal/bronchial obstructions.



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EUROPEAN SEARCH REPORT

Application Number
EP 96 11 9361

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	EP 0 470 569 A (TAKEDA CHEMICAL INDUSTRIES, LTD.) 12 February 1992 (1992-02-12)	1,2,6,8, 11,12	A61K9/16 A61K9/70 A61L31/00 A61K31/20 A61K31/335 A61K38/57
Y	* page 9; example 1 * * page 6, line 32 - line 33 * * page 10; example 3 * * claims 1,13 *	13-19	
X	WO 91 11193 A (CHILDREN'S HOSPITAL) 8 August 1991 (1991-08-08) * page 1, line 8 - page 6, line 21 * * page 27, line 27 - line 34 * * claims 11,23 *	1,5,8	
X	WO 91 10424 A (NORTHWESTERN UNIVERSITY) 25 July 1991 (1991-07-25) * page 1, line 1 - line 3 * * page 13, line 12 - line 23 * * page 19 - page 20; examples 7,8 *	1,5,27	
X	EP 0 375 520 A (CENTRE INTERNATIONAL DE RECHERCHES DERMATOLOGIQUES C.I.R.D.) 27 June 1990 (1990-06-27) * page 12; example 10 *	1,2,6,10	
P,X	K.A. WALTER ET AL.: "interstitial taxol delivered from a biodegradable polymer implant against experimental malignant glioma" CANCER RESEARCH, vol. 54, 15 April 1994 (1994-04-15), pages 2207-2212, XP002063920 BALTIMORE, MD(US) * page 2210, column 2, line 14 - line 21 * -/-	1,10	<div>TECHNICAL FIELDS SEARCHED (Int.Cl.6)</div> <div>A61K A61L</div>
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 20 September 2000	Examiner Menidjel, R
<div>CATEGORY OF CITED DOCUMENTS</div> <div> X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document </div>			

EPO FORM 1503 03 02 (P04001)



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 96 11 9361

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.8)
X	M.-H. BARTOLI: "in vitro and in vivo antitumoral activity of free and encapsulated taxol" JOURNAL OF MICROENCAPSULATION, vol. 7, no. 2, May 1990 (1990-05), pages 191-197, XP002063921 LONDON (GB) * the whole document *	1,2,8,10	
Y	EP 0 543 653 A (LILLY CO ELI) 26 May 1993 (1993-05-26) * abstract * * page 3, line 9 - line 34 *	13-19	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 20 September 2000	Examiner Menidjel, R
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

EPO FORM 1503 03.92 (P04001)



European Patent
Office

Application Number

EP 96 11 9361

CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- ☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- ☒ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
1-16 and 17-19,27
- ☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:



European Patent
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**LACK OF UNITY OF INVENTION
SHEET B**

Application Number
EP 96 11 9361

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims: 1-12,27

composition comprising an anti-angiogenic factor and a polymeric carrier

2. Claims: 13-16

a stent coated with an anti-angiogenic factor

3. Claims: 17-19

a graft coated with an anti-angiogenic factor

4. Claims: 20-26

use of a composition comprising an anti-angiogenic factor for the manufacture of a medicament for treating non-tumorigenic angiogenesis-dependent disease.

This subject is prone to further non-unity a posteriori as there is a multitude of different active substances and a multitude of different diseases.

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 96 11 9361

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20-09-2000

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0470569	A	12-02-1992	AT 130517 T	15-12-1995
			CA 2048544 A	09-02-1992
			DE 69114782 D	04-01-1996
			DE 69114782 T	18-04-1996
			JP 5000969 A	08-01-1993
			US 5202352 A	13-04-1993
WO 9111193	A	08-08-1991	AT 144710 T	15-11-1996
			AU 652744 B	08-09-1994
			AU 7335191 A	21-08-1991
			CA 2074725 A	26-07-1991
			DE 69122956 D	05-12-1996
			DE 69122956 T	22-05-1997
			DK 512071 T	25-11-1996
			EP 0512071 A	11-11-1992
			ES 2093699 T	01-01-1997
			GR 3021925 T	31-03-1997
			JP 6509791 T	02-11-1994
WO 9110424	A	25-07-1991	US 5192744 A	09-03-1993
			AT 126065 T	15-08-1995
			CA 2050290 A	13-07-1991
			DE 69111919 D	14-09-1995
			DE 69111919 T	07-12-1995
			DK 463152 T	06-11-1995
			EP 0463152 A	02-01-1992
			JP 4504429 T	06-08-1992
EP 0375520	A	27-06-1990	LU 87410 A	10-07-1990
			AT 87822 T	15-04-1993
			AU 626619 B	06-08-1992
			AU 4709989 A	28-06-1990
			CA 2006028 A	20-06-1990
			DE 68905914 D	13-05-1993
			DE 68905914 T	14-10-1993
			DE 375520 T	29-11-1990
			DK 647789 A	21-06-1990
			ES 2054069 T	01-08-1994
			FI 102142 B	30-10-1998
			IE 62032 B	14-12-1994
			JP 2946098 B	06-09-1999
			JP 3135913 A	10-06-1991
			KR 140088 B	01-06-1998
			NO 176504 B	09-01-1995
			NZ 231832 A	25-09-1991
			PT 92622 A, B	29-06-1990

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 96 11 9361

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

20-09-2000

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0375520 A		US 5292512 A	08-03-1994
		ZA 8909780 A	28-11-1990
EP 0543653 A	26-05-1993	US 5270047 A	14-12-1993
		AU 661067 B	13-07-1995
		AU 2845492 A	27-05-1993
		CA 2083223 A	22-05-1993
		HU 70034 A, B	28-09-1995
		JP 5201862 A	10-08-1993
		MX 9206610 A	01-05-1993
		NO 924461 A	24-05-1993
		RU 2084224 C	20-07-1997
		US 5314688 A	24-05-1994
		ZA 9208832 A	16-05-1994

EPO FORM P0458

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

